

# TELEVISION TUNER AND METHOD OF PROCESSING A RECEIVED RF SIGNAL

## Abstract

A television (TV) tuner includes a first mixer for mixing a received RF signal with a first local oscillator signal to produce an intermediate frequency signal, a second mixer for mixing the intermediate frequency signal with a second local oscillator signal for producing an in-phase baseband output signal, a third mixer for mixing the intermediate frequency signal with a third local oscillator signal for producing a quadrature-phase baseband output signal, the third local oscillator signal being the second local oscillator signal phase delayed, and a single phase locked loop (PLL) coupled to the first mixer and the second mixer unit for generating the first local oscillator signal and the second local oscillator signal according to a selected channel in the received RF signal.